

In the claims:

Following is a complete set of claims as amended with this Response.

1-6. (Canceled)

7. (Currently Amended) An apparatus comprising:

a substrate having an array of through holes, the through holes being transparent to visible light;

an array of micromechanical optical modulators on the substrate, each optical modulator being proximate a respective one of the through holes, each modulator having a first position to allow incident visible light to pass through the respective through hole and a second position to prevent incident visible light from passing through the respective through hole, the incident light corresponding to at least one color constituent of a video signal; and

an electronic control system for operating the optical modulators in accordance with a received video signal; and

an optical overlayer proximate the array of optical modulators to direct incident light to a respective one of the through holes.

8. (Original) The apparatus of Claim 7, wherein each optical modulator comprises a transparent portion and an opaque portion and wherein the incident light is incident on the transparent portion in the first position and the incident light is incident on the opaque portion in the second position.

9. (Original) The apparatus of Claim 7, wherein each optical modulator comprises an opaque portion and wherein the incident light is not incident on the optical modulator in the first position and the incident light is incident on the opaque portion in the second position.

Attorney Docket No. 42P17096
Application No. 10/815,412

10. (Original) The apparatus of Claim 9, wherein the opaque portion is reflective.

11. (Canceled)

12. (Original) The apparatus of Claim 7, wherein the optical overlayer comprises an array of micro-lenses.

13. (Previously Presented) An apparatus comprising:

an array of active surfaces, each having a first portion corresponding to an ON state and a second portion corresponding to an OFF state, the second portion comprising an angled mirrored surface to reflect incident light away from the direction from which it came; and

an array of electromechanical actuators, each corresponding to one of the active surfaces, to translate the active surface to alternately expose the first portion or the second portion to incident visible light.

14. (Original) The apparatus of Claim 13, wherein the first portion comprises a substantially flat reflective surface to reflect incident light back in the direction from which it came.

15. (Canceled)

16. (Original) The apparatus of Claim 13, wherein at least one of the first surface and the second surface comprise a polarization-altering element.

17. (Original) The apparatus of Claim 13, wherein at least one of the first surface and the second surface comprise a powered optical element.

18. (Original) The apparatus of Claim 13, further comprising a substrate having an array of through holes, each through hole being proximate a respective active surface, the through holes being transparent to visible light, and wherein one of either the

first or second portions of the active surface is transparent to visible light to allow the incident light to pass through the respective through hole.

19. (Previously Presented) The apparatus of Claim 13, further comprising an optical overlayer proximate the array of active surfaces to direct incident light to the active surfaces.

20. (Currently Amended) An apparatus comprising:

a substrate having an array of through holes through the substrate, the through holes being transparent to visible light;

an array of active surfaces, each active surface corresponding to and being proximate to a through hole of the ~~first~~ array of through holes, the surfaces of the array corresponding to either an ON state or an OFF state with respect to incident visible light; and

an array of electromechanical actuators, each corresponding to a surface of the array, to move the surfaces of the array to alternately cover or uncover a respective through hole of the substrate, the incident light being allowed to pass through the respective through hole when the through hole is uncovered and the incident light striking a surface of the array when the respective through hole is covered,

wherein the array of active surfaces each comprise a first portion to reflect a first color band of visible light, and a second portion to reflect a second color band of visible light.

21. (Canceled)

22. (Previously Presented) The apparatus of Claim 20, wherein the surfaces of the array are reflective.

23. (Canceled)

24. (Previously Presented) The apparatus of Claim 20, wherein the surfaces of the array are reflective surfaces and correspond to an ON state and wherein the through holes correspond to an OFF state.

25. (Previously Presented) The apparatus of Claim 20, wherein the actuators each correspond to a surface of the second array, for translating the surfaces to alternately cover or uncover the respective through holes.

26. (Previously Presented) The apparatus of Claim 20, wherein the actuators each correspond to a surface of the array, for rotating the surfaces about a remote pivot point to alternately cover or uncover the respective through holes.

27. (Original) The apparatus of Claim 20, further comprising an optical overlayer proximate the array of active surface to direct incident light to the active surfaces.

28. (Previously Presented) An apparatus comprising:
an array of active surfaces, each having a first portion corresponding to an ON state with respect to incident visible light and a second portion corresponding to an OFF state with respect to incident visible light, the first and second portions being arrayed about a central axis;

an array of electromechanical actuators, each corresponding to one of the active surfaces, for rotating each active surface about its respective central axis to alternately expose the first portion or the second portion to incident visible light; and

a substrate having an array of through holes, each through hole being proximate a respective active surface, the through holes being transparent to visible light, and wherein one of either the first or second portions of the active surfaces is transparent to visible light to allow the incident light to pass through the respective through hole.

29. (Previously Presented) The apparatus of Claim 28, wherein the first portion reflects a first color band of visible light, the active surfaces each further comprising a third portion corresponding to an ON state that reflects a second color band of visible light.

30. (Canceled)

31. (Canceled).

32. (Original) The apparatus of Claim 28, further comprising an optical overlayer proximate the array of active surfaces to direct incident light to the active surfaces.

33. (Previously Presented) The apparatus of Claim 11, wherein the overlayer comprises an array of optical elements proximate the array of optical modulators, and positioned such that each optical element of the array directs incident light on a respective one of the optical modulators of the array.

34. (Previously Presented) The apparatus of Claim 33, wherein the optical elements comprise plano-convex micro-lenses formed on a transparent sheet.

35. (Previously Presented) The apparatus of Claim 11, wherein each optical modulator of the array has an optical section and a mechanical section and wherein the overlayer directs incident light on a respective optical section and reduces incident light on the corresponding mechanical section.

36. (Previously Presented) The apparatus of Claim 35, wherein the overlayer focuses the light at a location proximate the respective optical section.

37. (Previously Presented) The apparatus of Claim 11, further comprising a post to position the overlayer at a fixed distance from the array of micromechanical optical modulators.

38. (Currently Amended) The apparatus of Claim 11 ~~Claim 7~~, wherein the second portion comprises an angled mirrored surface to reflect incident light away from the direction from which it came.

39. (Previously Presented) The apparatus of Claim 19, wherein the overlayer comprises an array of optical elements proximate the array of active surfaces, and positioned such that each optical element of the array directs incident light on a respective one of the active surfaces of the array.

40. (Previously Presented) The apparatus of Claim 19, wherein the overlayer focuses the light at a location proximate the respective active surface.

41. (Previously Presented) The apparatus of Claim 20, wherein the surfaces of the array comprise a polarization-altering element.

42. (Canceled)

43. (Previously Presented) The apparatus of Claim 28, wherein the second portion comprises an angled mirrored surface to reflect incident light away from the direction from which it came.

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